ISIS - Bug #2199

findimageoverlaps - doesn't find overlaps for an image contained within another

2014-12-01 06:06 PM - Lynn Weller

Status:	Closed		
Priority:	Normal		
Assignee:	Marjorie Hahn		
Category:	Applications		
Target version:	3.4.13 (FY16 R3 2016-08-31 Aug)		
Impact:	Modified ImageOverlapSet to account for fully overlapped images.	**Software Version:**	

Description

I have an image which is completely contained within another and findimage overlaps fails with the following message:

Group = Error
Program = findimageoverlaps
Class = "USER ERROR"
Code = 2
Message = "No overlaps were found"
File = ImageOverlapSet.cpp
Line = 428
End_Group

I have 2 completely different datasets that I have tested this on where it fails. See data under /work/users/lweller/Isis3Tests/Findimageoverlaps/Set1/ and /work/users/lweller/Isis3Tests/Findimageoverlaps/Set2/. This is the command I used for both: findimageoverlaps fromlist=cubs.lis overlaplist=ovl.dat errors=ovl.err detailed=true

This is concerning because it implies that in larger dataset, there are instances where overlapping images are not being connected by points simply because one image is completley within the boundaries of another. I have not checked this but will do so in the next few days with just a few overlapping images where at least one is completely contained within one of the others. I report what I find. In the meantime, it seems to me this is a significant bug. And yes, these images did have footprintinit run on them.

History

#1 - 2014-12-01 06:11 PM - Lynn Weller

- Description updated

#2 - 2014-12-02 09:30 AM - Lynn Weller

- Description updated

#3 - 2014-12-02 11:21 AM - Lynn Weller

- File Set3_3Polys_MixedOvl.png added

- File Set4_3Polys_MixedOvl_2.png added

No matter the number of images, if they are all completely contained within each other, findimageoverlaps will fail. I added another test under .../Set1/ where there are 3 nested images that will fail. The command for that case is:

findimageoverlaps froml=three_cubs.lis overlaplist=ovl_3.dat errors=ovl_3.err detailed=true

However, if there are 3 images and one is completely contained in another, but the third image partially overlaps those two, then findimageoverlaps runs and autoseed adds points between/among images as expected. This case is under ../Set3/. See attached figure Set3_3Polys_MixedOvl.png.

Also, suprisingly, if there are 3 images and one is completely contained in another but the third one only partially overlaps one of those images (and not the one that is completely contained within the other)findimageoverlaps and autoseed again works, and I get points between the fully contained polygon and the image that contains it. This case is under ../Set4/. See attached figure Set3_3Polys_MixedOvl2.png. This one includes points generated by autoseed to demonstrated how the "contained" polygon managed to get points.

So it seems the only case where findimageoverlaps doesn't work properly is when one of more images is completely contained within other polygons and no other overlaps exist. Clear as mud? Hopefully the png's help in the latter two cases.

#4 - 2014-12-03 01:01 PM - Moses Milazzo

- Status changed from New to Acknowledged

#5 - 2014-12-04 04:05 PM - Lynn Weller

- Priority changed from High to Normal

I have changed the priority from High to Normal because there is no particular project that I am currently working on that is affected by this particular bug. Plus, as I mentioned via Set 4, all overlaps seem to be accounted for when there are multiple overlaps even though the failure scenario is included. If this isn't clear drop by my office and I'll draw pictures.

FYI - This error was brought to my attention by a researcher at CalTech with whom I have been corresponding with over the past couple of years. I suggested h try using seedgrid and cnetadd for his two images to move forward and so far this seems to work for him. I suggested if he really needed to use findimageoverlaps/autoseed on these files he post to the public support board and let us know of the error so that we can possibly consider a different priority for getting the bug addressed (plus others might be interested in knowing about the problem). Since I could reproduce the problem with many types of data I thought it was worth the internal post. Plus I was concerned our larger networks might be impacted so I did additional tests. At any rate, it's a problem, but not keeping me from doing my work and there is a work around, so I lowered the priority. Someone may want to lower the triage_priority if they think its appropriate.

#6 - 2016-07-06 10:47 AM - Stuart Sides

- Status changed from Acknowledged to Assigned

- Assignee set to Marjorie Hahn

- Target version set to 3.4.13 (FY16 R3 2016-08-31 Aug)

#7 - 2016-07-06 12:09 PM - Marjorie Hahn

- Status changed from Assigned to In Progress

#8 - 2016-07-27 04:03 PM - Marjorie Hahn

- Status changed from In Progress to Resolved

- Impact updated

This bug fix is available for testing in the directory /work/projects/isis/latest/m02199 on prog6.

#9 - 2016-08-02 02:26 PM - Lynn Weller

- Status changed from Resolved to Closed

I have rerun all my original tests and then some under isis3production2016-07-19 and /work/projects/isis/latest/m02199/ and everything ran as expected.

In the case of polygons within polygons where findimageoverlaps failed and reports that "No overlaps were found", the fixed version runs and points are created when followed by autoseed. This pertains to my data under Set1/ and Set2/. I also reran all of the tests under Set3/ and Set4/ and verified that they continue to work as expected. I threw a couple of other tests in the mix with different data types to be sure everything was continuing to work. It all looks great!

Thank you!

#10 - 2016-08-05 10:46 AM - Lynn Weller

Tested the additional changes made after the post was resovled and closed and there were no issues. Still looks good!

Files

Set3_3Polys_MixedOvl.png	8.79 KB	2014-12-02	Lynn Weller
Set4_3Polys_MixedOvl_2.png	17.6 KB	2014-12-02	Lynn Weller